570.5a
Bd+8

GENERAL LIBRARY,
UNIV. OF MICH.
FEB 11 1907

Volume VII, Number 2 February, 1907

THE AMERICAN MUSEUM JOURNAL

Published monthly from October to May inclusive by
THE AMERICAN MUSEUM OF NATURAL HISTORY

American Museum of Natural History

Seventy-seventh Street and Central Park West, New York City

OFFICERS

President
MORRIS K. JESUP

First Vice-President
J. PIERPONT MORGAN

Second Vice-President
HENRY F. OSBORN

Treasurer
CHARLES LANIER

Secretary
J. HAMPDEN ROBB

Director
HERMON C. BUMPUS

BOARD OF TRUSTEES

Class of 1906

CHARLES LANIER
ANSON W. HARD
WILLIAM ROCKEFELLER
GUSTAV E. KISSEL
SETH LOW

Class of 1907

D. O. MILLS
ARCHIBALD ROGERS
ALBERT S. BICKMORE
CORNELIUS C. CUYLER
ADRIAN ISELIN, JR.

Class of 1908

H. O. HAVEMEYER
A. D. JUILLIARD
FREDERICK E. HYDE
GEORGE S. BOWDOIN
CLEVELAND H. DODGE

Class of 1909

MORRIS K. JESUP
JOSEPH H. CHOATE
J. PIERPONT MORGAN
GEORGE G. HAVEN
HENRY F. OSBORN

Class of 1910

J. HAMPDEN ROBB
JAMES H. HYDE
PERCY R. PYNE
ARTHUR CURTISS JAMES

THE AMERICAN MUSEUM OF NATURAL HISTORY was established in 1869 to promote the Natural Sciences and to diffuse a general knowledge of them among the people, and it is in cordial coöperation with all similar institutions throughout the world. The Museum authorities are dependent upon private subscriptions and the dues from members for procuring needed additions to the collections and for carrying on explorations in America and other parts of the world.

The membership fees are,

Annual Members.....	$ 10	Fellows.....	$ 500
Life Members.....	100	Patrons.....	1000

All money received from membership fees is used for increasing the collections and for developing the educational work of the Museum.

The Museum is open free to the public on Wednesdays, Thursdays, Fridays, Saturdays and Sundays. Admittance is free to Members every day.

NORTHEAST QUARTER OF FOYER
Showing five of the busts of American Men of Science

The American Museum Journal

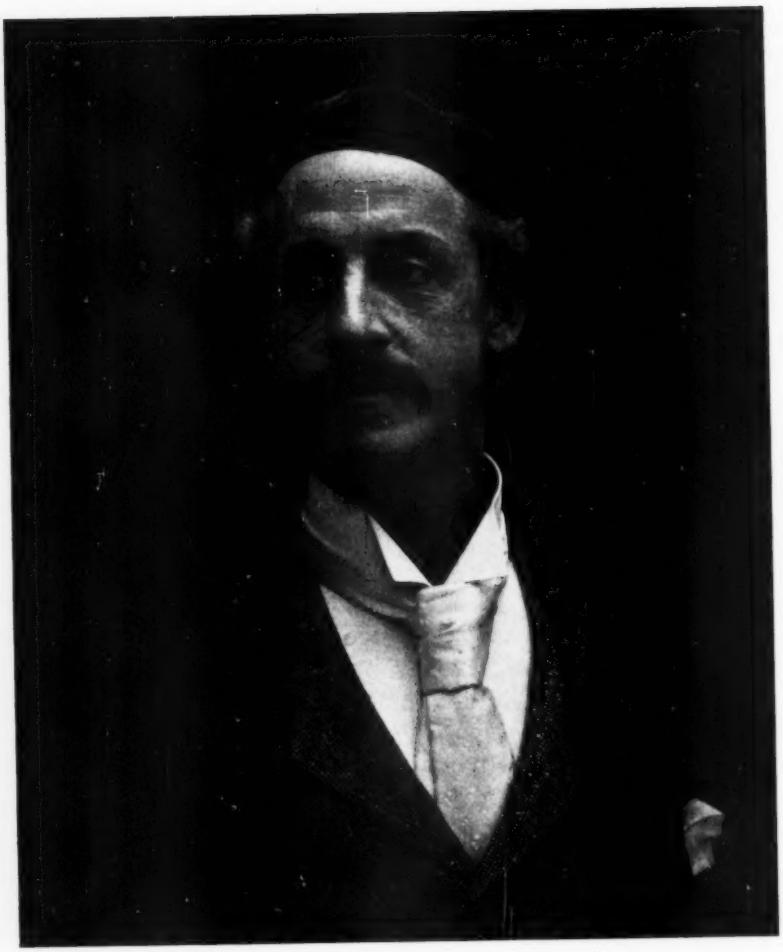
VOL. VII FEBRUARY, 1907 No. 2

MEMORIALS OF MEN OF SCIENCE.

SATURDAY afternoon, December 29, the impressive unveiling ceremonies of the busts which have been installed in the foyer representing ten of the men who have been foremost in the advancement of science in America were held in the large auditorium. After singing the national anthem "America," Doctor Hermon C. Bumpus, Director of the Museum, acting for Mr. Morris K. Jesup, President, presented the busts to the Trustees. After the gift had been accepted by the Hon. Joseph H. Choate on behalf of the board, memorial addresses were delivered in accordance with the following programme:

Benjamin Franklin by Dr. S. Weir Mitchell of Philadelphia; Alexander von Humboldt, by His Excellency Baron Speck von Sternburg, German Ambassador, (Read by Major T. von Körner, Military Attaché of the Embassy); John James Audubon, by Dr. C. Hart Merriam, Chief, U. S. Biological Survey, Washington, D. C.; John Torrey, by Dr. Nathaniel L. Britton, Director, New York Botanical Garden, New York City; Joseph Henry, by Dr. Robert S. Woodward, President, Carnegie Institution, Washington, D. C.; Louis Agassiz, a letter was read from the Rev. Edward Everett Hale, an intimate personal friend of Professor Agassiz; James Dwight Dana, by Dr. Arthur Twining Hadley, President, Yale University, New Haven, Conn.; Spencer Fullerton Baird, by Dr. Hugh M. Smith, Deputy Commissioner, Bureau of Fisheries, Washington, D. C.; Joseph Leidy, by Dr. William Keith Brooks, Johns Hopkins University, Baltimore, Md.; Edward Drinker Cope, by Dr. Henry Fairfield Osborn, Curator, Department of Vertebrate Palæontology, American Museum of Natural History.

The occasion was a notable event in the annals of the Museum and of American science in general. The auditorium was crowded to its full capacity with members of the Museum and visiting scientists, and hundreds were turned away from the hall for lack of space for their accommodation. The addresses were alive with interest and some of them were historic in value for their appreciation of great men of the



WILLIAM COUPER

The sculptor of the busts in the Foyer

past by great men of the present who were their pupils or their friends. A pamphlet containing the addresses in full and illustrated with photographs of the busts is now being prepared to serve as a worthy memento of the occasion and a guide leaflet to the foyer.

The artist who prepared the busts is Mr. William Couper of this city, a sculptor of international reputation. The busts are intended to represent the subjects in the prime of life and at the zenith of their powers. The data used were photographs, painted and other portraits, descriptions by contemporaries and the criticisms and suggestions of friends and relatives, as far as obtainable.

EXHIBITION OF THE PROGRESS OF SCIENCE.

AS a feature of the great convention of American scientists which was held from December 27 to January 2 at the Museum, Columbia University and other institutions in the city, the New York Academy of Sciences in coöperation with the Museum assembled material from all over the country to represent the progress in science, both pure and applied, that has been made during the past few years. It would be impracticable to give, in the space available in the AMERICAN MUSEUM JOURNAL, an exhaustive account of the noteworthy features of the exhibition and we shall attempt only to touch upon a few of the most salient points. The exhibition was given Friday and Saturday, December 28 and 29, under the direct auspices of the Academy and was continued under the auspices of the Museum for two weeks longer.

In the department of Anatomy a series of excellent preparations of electric fishes and dissections and diagrams of their electric organs was surprising as showing the number of such species and the strength of current induced by their peculiar organs. The exhibit of Astronomy was declared by an eminent authority to be the most remarkable and important assemblage of its kind thus far gotten together in this country, since it showed all the most important recent work of all the great observatories in the United States. In the department of Bacteriology there were extensive exhibits of cultures and methods from all the great institutions in this city which are carrying on researches in this science,

including the American Museum. From the point of view of the specialist, the exhibition was most interesting, but it required too much explanation for the average visitor to spend the time over it that it deserved.

The department of Botany contained many features of general interest, among which may be mentioned the natural Spineless Cactus from the Island of Culebra, Porto Rico; a set of more than 100 dairy fungi and bacteria, including those that give the flavor to Camembert cheese, produce the sweet and sour curdling of milk and turn milk different colors; and a series of remarkable photomicrographs of thin-sections of American woods.

The Chemistry exhibit was large. Its most popular features, perhaps, were those pertaining to radium and the effects of its use in surgery. The department of Electricity was much in evidence at the exhibition, on account, particularly, of the Telharmonium and the "Helion Filament" incandescent lamps. The former is a newly devised musical instrument, while the latter is a new lamp that bids fair to introduce a revolution in methods of illumination. The production of the helion lamp follows closely upon the successful manufacture of the tantalum and the tungsten lamps and marks the third wonderful discovery in incandescent lighting within two years. The new filament consists of silicon deposited upon carbon, and, although it costs more than the ordinary carbon filament, it lasts much longer and gives more than three times as much light for the same consumption of power.

In the department of Ethnology and Archæology local interest centered around a large earthenware jar of Iroquoian Indian manufacture which was exhumed recently at 214th Street and 10th Avenue, Manhattan Island. The specimen is not unique, but it is the most perfect that has been found in this vicinity. An exhibit having important bearing on the antiquity of man in America was that of some worked bone objects from caves in California. The objects are apparently of Glacial or interglacial age.

The department of Experimental Evolution attracted the attention of the public through the crowing of some live roosters introduced for the purpose of showing the effects of breeding along certain lines. Other interesting exhibits were specimens and diagrams showing the manifestations of the Mendelian law of inherited characteristics under cross-breeding. In the department of Experimental Psychology mention

may be made of a series of photographs of the movements of the eye in examining sundry objects and particularly in reading, together with the apparatus used in making the negatives.

Geology and Geography were well represented, particularly through the maps and other publications showing the recent work of the United States and several State geological surveys. Special mention should be made of the new unpublished maps of Connecticut and Massachusetts. The American Museum contributed to this department models of Martinique and Mt. Pelé and a series of transparencies of the West Indies and Mexico.

In the section of Mineralogy the most important displays of popular interest were the series of specimens of unusually large and perfect crystals of Calcite collected last summer in the northern part of New York State by an expedition from the State Museum and the set of great ruby red Tourmalines and Beryls from near San Diego, California. The American Museum showed here some of the most striking recent accessions to its cabinet including a particularly handsome group of large crystals of Ruby Tourmaline (Rubellite) from California.

Invertebrate Palæontology does not ordinarily contribute showy material to an exhibition, but attention was attracted at the Academy "conversazione" by the display of Trilobites, Eurypterids (crustaceans) Hexactinellids (glass sponges) and other fossils sent down by the New York State Museum from recent collecting in the central and western part of the state. The American Museum contributed to this section some remarkable Cretaceous cephalopods and a series illustrating the Jurassic fauna of the Black Hills of South Dakota and Wyoming.

The major portion of the display in the section of Vertebrate Palæontology was contributed by the American Museum and consisted of many remarkable specimens most of which have been noticed in previous issues of the JOURNAL. Mention should be made, however, of the skeleton of the strange-looking Fin-backed Lizard, *Naosaurus*, the restorations of several fossil fishes and the practically complete specimen of a giant Tortoise from the Badlands of Wyoming. This Tortoise has its nearest living relatives among the big turtles of the Galapagos Islands.

To the sections of Pathology, Pharmacology, Physics and Physiology the American Museum made no contributions of exhibits. The section of Physics, as usual, attracted much attention from visitors.

Recent earthquakes aroused much interest in a new form of seismograph and its records for New York City. A series of photographs taken with the lens from a fish's eye was worth more than a passing glance. The Zeiss epidiascope is a new and successful electric lantern device for throwing on a screen pictures from ordinary photographic prints and other opaque objects. A prominent feature of the Physics exhibit was a lecture Saturday evening, December 29, by Professor E. F. Nichols on "The Pressure of Light," illustrated with experiments and lantern slides. The Physiology exhibit was extensive and contained much of technical as well as popular interest. Something in motion always attracts a crowd, hence the popularity of the zoëtrope showing a series of kinetoscope pictures of the movements of the alimentary canal taken with X-ray apparatus, and the working model of the heart showing perfectly the action of valves.

By far the most attractive exhibit of all, and the one showing most clearly the advances made during the past five years, at least along certain lines, was that of the department of Zoölogy. The exhibit consisted principally of contributions from the American Museum of Natural History, the New York Zoölogical Park, the Aquarium and the Brooklyn Museum. Among the American Museum exhibits, most attention was attracted perhaps by that of two mounted lions, showing in most striking manner the advance that has been made in a comparatively few years over the old methods of taxidermy. The new ideas were exemplified in the mount of "Hannibal," the lion, so well known to many visitors at the Zoölogical Park in Bronx Park. Other exhibits were entered by the Museum, but not removed from the exhibition halls. These were the group of Wapiti, or American Elk, in the East Mammal Hall, second floor of the building, and ten groups of North American birds with panoramic backgrounds, illustrating a novel method of lighting. In seven of these the background is curved, so as to represent the horizon in its natural position. Mention should be made of the wax-and-glass models of various invertebrates, particularly some insects, the familiar Squid of the New England coast and an Actinian (sea anemone). The exhibit from the Zoölogical Park consisted, for the most part, of maps, photographs, transparencies and samples of labels. The New York Aquarium, in addition to similar exhibits, showed some of the marine aquaria which are supplied to the public schools of the city. The Brooklyn Institute Museum exhibited typical collections

showing its efforts to disseminate knowledge outside the Museum. Japanese Sharks, Hag Fishes and other curious marine forms were very interesting to the specialist, and Economic Entomology was illustrated, in part, by the photographs, transparencies and specimens illustrating recent progress in New Jersey in the extermination of the mosquito and in methods of educating the public on the subject.

EXPEDITION TO THE DESERT OF FAYOUM, EGYPT.

ON January 5 Professor Henry F. Osborn sailed for Egypt accompanied by Messrs. Walter Granger and George Olsen of the Department of Vertebrate Palæontology on an exploring expedition of three months into the Fayoum desert. In 1900 Professor Osborn[1] predicted that the remote ancestors of the Proboscidea, Sirenia and Hyracoidea would prove to be of African origin, and soon afterward, through the extensive exploration and study of this region by the Egyptian Survey, this prophecy came true. This desert has yielded some of the most remarkable recent discoveries in palæontology, among which may be cited, besides those in the three orders above mentioned, many entirely new and unique forms, one of which is *Arsinoitherium*. Dr. C. W. Andrews of the British Museum and Mr. Hugh J. N. Beadnell of the Egyptian Survey have been the principal students of this fauna and have described their discoveries in a series of papers published during the last five years, culminating in a large quarto memoir published last year by Dr. Andrews.

Ever since the fulfillment of his prophecy and the discovery of this fauna, new to science, Professor Osborn has been anxious to visit and explore the Fayoum, but he felt that he could not go before the publication of Dr. Andrews's report freed the field to all scientific workers. Palæontologists at present regard Africa as the storm center of their work and look to the revelation of its secrets for the solution of many of the problems which confront them in the unraveling of the past. If the expedition is successful, the addition of this fauna to the collection of fossil vertebrates in our Museum will greatly enhance its interest to the public and its value to the student.

[1] Faunal Relations of Europe and America during the Tertiary Period and Theory of the Successive Invasion of an African Fauna into Europe. Ann. N. Y. Acad. Sci., Vol. XIII, No. 1, July 21, 1900, pp. 1–72.

President Jesup provided the necessary pecuniary support for the expedition, and Professor Osborn embarked on his undertaking with letters from President Roosevelt to Lord Cromer, the head of the Egyptian government, introducing him as Geologist and Palæontologist of the U. S. Geological Survey, as well as Vice-president and Curator of this Museum, and from eminent English and German scientists who have preceded him in the work of exploring this desert. Professor Osborn will return about April 1 and will doubtless have a story of experiences very different from those incident to the exploration of our own western country, to which he has devoted so much time in the last fifteen years, interesting as the latter have been. The party goes by camel train southwestward from Cairo three days' journey into the desert, and the region in which work is to be carried on is at least fifty miles from the nearest source of water.

THE MUSEUM "BULLETIN" FOR 1906.

THE twenty-second volume of the BULLETIN of the American Museum was issued during the year 1906. The articles, which pertain to the scientific work of the museum and are technical in character, are also published separately and, like the volume itself, may be obtained from the Librarian. The table of contents of the volume is as follows:

Page

ART. I. The Habits of the Tent-Building Ant (*Cremastogaster lineolata* Say). By WILLIAM MORTON WHEELER. (Plates I–VI) . 1

ART. II. On the Skull of *Edaphosaurus pogonias* Cope. By E. C. CASE. (Plate VII) 19

ART. III. Descriptions of two new Genera (*Echmatemys* and *Xenochelys*) and two new Species (*Xenochelys formosa* and *Terrapene putnami*) of Fossil Turtles. By OLIVER P. HAY. (7 text figures) 27

ART. IV. On the Founding of Colonies by Queen Ants, with special reference to the Parasitic and Slave-making Species. By WILLIAM MORTON WHEELER. (Plates VIII–XIV) 33

ART. V. The Orthoptera of the Bahamas. By JAMES A. G. REHN. (4 text figures) 107

ART. VI. The Myzostomes of the "Albatross" Expedition to Japan. By J. F. MCCLENDON. (Plates XV–XVII) 119

ART. VII. Notes on Some Jurassic Fossils from Franz Josef Land,

brought by a Member of the Ziegler Exploring Expedition. By R. P. WHITFIELD. (Plates XVIII, XIX) 131

ART. VIII. New or little-known Mammals from the Miocene of South Dakota. American Museum Expedition of 1903. By W. D. MATTHEW and J. W. GIDLEY. Part IV, J. W. G. (20 text figures) 135

ART. IX. On Two Interesting Genera of Eocene Turtles, *Chisternon* Leidy and *Anostera* Leidy. By OLIVER P. HAY. (3 text figures) 155

ART. X. List of Birds collected in Northwestern Durango, Mexico, by J. H. Batty, during 1903. By WALDRON DE WITT MILLER . . 161

ART. XI. Arachnida of the Bahamas. By NATHAN BANKS. (4 text figures) 185

ART. XII. Mammals from the States of Sinaloa and Jalisco, Mexico, collected by J. H. BATTY during 1904 and 1905. By J. A. ALLEN. (Plates XX–XXXIII and 3 text figures) 191

ART. XIII. Milk Dentition of the Hyracoid *Saghatherium* from the Upper Eocene of Egypt. By HENRY FAIRFIELD OSBORN. (3 text figures) 263

ART. XIV. A New Wingless Fly (*Puliciphora borinquenensis*) from Porto Rico. By WILLIAM MORTON WHEELER. (Plate XXXIV) 267

ART. XV. Volcanic Ash in the Bridger Beds of Wyoming. By J. W. SINCLAIR. (Plates XXXV–XXXVIII) 273

ART. XVI. *Tyrannosaurus*, Upper Cretaceous Carnivorous Dinosaur. Second Communication. By HENRY FAIRFIELD OSBORN. (Plate XXXIX) 281

ART. XVII. New Notes on the Osteology of *Triceratops*. By BARNUM BROWN. (Plate XL, and 2 text figures) 297

ART. XVIII. The Ants of Japan. By WILLIAM MORTON WHEELER. (Plate XLI and 2 text figures) 301

ART. XIX. The Ants of the Grand Canyon, Arizona. By WILLIAM MORTON WHEELER 329

ART. XX. The Ants of the Bermudas. By WILLIAM MORTON WHEELER. (1 text figure) 347

ART. XXI. Hypothetical Outlines of the Continents in Tertiary Times. By W. D. MATTHEW. (7 text figures) 353

ART. XXII. A New Genus of Horses from the Mascall Beds, with Notes on a Small Collection of Equine Teeth in the University of California. By J. W. GIDLEY. (1 text figure) 385

ART. XXIII. Remarks on and Descriptions of Jurassic Fossils of the Black Hills. By R. P. WHITFIELD and E. O. HOVEY. (Plates XLII–LXII) 389

ART. XXIV. An Ethological Study of certain Maladjustments in the Relations of Ants to Plants. By WILLIAM MORTON WHEELER. (Plates LXIII–LXVIII and 1 text figure) 403
ART. XXV. The Bees of Florissant, Colorado. By T. D. A. COCKERELL 419
ART. XXVI. A Fossil *Cicada* from Florissant. By T. D. A. COCKERELL. (1 text figure) 457
ART. XXVII. The Fossil Mollusca of Florissant, Colorado. By T. D. A. COCKERELL 459
ART. XVIII. Mammals from the Island of Hainan, China. By J. A. ALLEN. (Plate LIX) 465
ART. XXIX. Fossil Parasitic and Phytophagous Hymenoptera from Florissant, Colorado. By CHARLES T. BRUES 491
ART. XXX. Fossil Saw-flies from Florissant, Colorado. By T. D. A. COCKERELL 499

MUSEUM NEWS NOTES.

PROFESSOR William M. Wheeler, Curator of Invertebrate Zoölogy, lectured in the auditorium on "The Polymorphism of Social Insects" before a large audience on Friday, December 28. The lecture was followed by a meeting at which was organized the Society of American Entomologists, with Professor J. H. Comstock of Cornell University as president and Doctor E. S. G. Titus of Washington, D. C., as secretary. The society includes economic as well as other working entomologists and begins life with nearly three hundred members. In connection with the meeting an interesting exhibition was made, the principal features of which were some air-brush enlargements of sundry insects for lecture room purposes, a berlese apparatus for catching insects, a wonderful series of photographs of spiders' webs, an artificial ant nest and a series of excellent specimens of fossil insects from Florissant, Colorado.

ON December 28 and 29 the Geological Society of America held largely attended sessions of its annual meeting at the Museum. This meeting formed a portion of the great convention of scientific societies which was held in New York City from December 27 to January 3, inclusive.

On Saturday evening, December 29, a reception to the visiting delegates of the American Association for the Advancement of Sciences and affiliated societies was given at the Museum by the trustees in co-operation with the New York Academy of Sciences. One of the features of this reception was a series of brief lectures with lantern slide illustrations which were given in the large lecture hall according to the following programme:

"Mt. Pelé and St. Pierre," by E. O. Hovey;
"The Fur-Seal Islands of Alaska," by Charles H. Townsend;
"The Home-Life of the Brown Pelican," by F. M. Chapman;
"The Fire-Walking Ceremony of Tahiti," by H. E. Crampton;
"Illustrations of Wild Flowers used in Lectures by the Society for the Preservation of Native Plants," by Charles L. Pollard;
"Recent Explorations and Results of the Department of Vertebrate Palæontology," by Henry F. Osborn.

The American Bison Society held its annual meeting at the Museum on Thursday, January 10. This society has for its object not only the prevention of the extermination of the Bison, but also the encouragement of the raising of the animal as a commercial proposition. A generation ago the Bison, or American Buffalo, roamed over the western plains in vast herds, estimated to contain more than ten million individuals, while to-day, on account of the merciless and wanton slaughter practised in the early eighties, scarcely two thousand are known to be in existence. The society proposes to encourage the establishment of Bison reservations in each state where climate and other conditions are favorable for the maintenance and increase of herds. For New York the proposition is that, as a beginning, the State set aside nine square miles in one of the reserved areas of the Adirondack region and appropriate $15,000 for the purchase and maintenance of a herd of fifteen Bison. Dr. William T. Hornaday, director of the New York Zoölogical Park, is the president of the society.

THE Department of Vertebrate Palæontology has added to its Horse Alcove, through the generosity of Mr. Randolph Huntington, the skeleton of the Arabian stallion "Nimr." The skeleton has been mounted by Mr. S. H. Chubb under the direction of Professor Osborn in such a manner as to show the characteristics of the Arabian Horse, particularly the high elevation of head and tail when the animal is excited. This race of Horse is characterized by a small skull with high, prominent, broadly separated orbits, slender nose and concave profile, horizontal position of pelvis, round thorax, long and slender cannon bones and pasterns. The mounting of the skeleton was undertaken only after long study of the Arabian horses in the Huntington stud and many photographs taken from life.

MISS MARY LOIS KISSELL has been engaged by the Department of Ethnology to arrange the exhibits of basketry for the various North American tribes. The Museum possesses large collections of some very rare Californian baskets, particularly the so-called "ti-stitch" of the Pomo. The entire Pomo collection has been re-arranged according to the weave, and labels for the specimens are being prepared. The plan of the new exhibit includes a general synoptic series for the chief weaves employed in the different parts of the world. Following this it is proposed to arrange according to locality the Museum's large collection of baskets from California and the adjacent parts of the Pacific Coast.

THE American Institute of Social Service opened an Exposition of Safety Devices and Industrial Hygiene at the Museum Tuesday, January 29, to continue two weeks. The exhibition, which is free to the public, comprises live machinery, working models and photographs from various European countries, as well as from the United States, and shows in striking manner the fact that we are nearly a generation behind Europe in any organized effort to protect workmen from injury while they are at work. The exhibition has aroused much public interest on account of the great recent increase in accidents affecting the life, limbs and health of American workmen.

THE record of attendance at the Museum during the year 1906 was 476,133 visitors.

LECTURE ANNOUNCEMENTS.

MEMBERS' COURSE.

THE second course of lectures for the season 1906–1907 to Members of the American Museum of Natural History and persons holding complimentary tickets given them by Members will be given during February and March. The lectures will be delivered on Thursday evenings at 8:15 and will be fully illustrated by stereopticon views. The programme for the course is as follows:

February 21.— FRANK M. CHAPMAN, "The Birds of Spring."
February 28.— RICHARD TJÄDER, "Hunting Big Game in British East Africa."
March 7.— FREDERIC A. LUCAS, "Whales and Whaling."
March 14.— EDMUND OTIS HOVEY, "Earthquakes; Their Causes and Effects."
March 21.— CLARK WISSLER, "Living with the Indians of the Plains."

PUPILS' COURSE.

THE Lectures to Public School Children will be resumed in March and will be given in accordance with the following programme.

	Mar.	Apr.	
Monday,	4	8.	—"Along the Historic Hudson." By G. H. Sherwood.
Wednesday,	6	10.	—"Life in the Far North." By H. I. Smith.
Friday,	8	12.	—"New York City in Colonial Days." By R. W. Miner.
Monday,	11	15.	—"The American Indians of today." By G. H. Pepper.
Wednesday,	13	17.	—"Commercial Centers of Europe." By E. O. Hovey.
Friday,	15	19.	—"Farming and Ranching in the United States." By G. H. Sherwood.
Monday,	18	22.	—"Travels in South America." By Barnum Brown.
Wednesday,	20	24.	—"Natural Wonders of our Country." By R. W. Miner.
	Apr.		
Friday,	5	26.	—"The Products of Our Mines." By E. O. Hovey.

These lectures are open to public school children accompanied by their teachers and to the children of Members of the Museum on the presentation of membership tickets. Particulars of this course may be learned by addressing the Director of the Museum.

PEOPLE'S COURSE.

Tuesdays at 8 P. M. The continuation of a course of illustrated lectures by George Wharton James.

February 5.—"The Religion of the Southwest Indians."
February 12.—"The Prehistoric and Aboriginal Dwellers of the Southwest."
February 19.—"The Colorado Desert: Its Horrors, Mystery and Reclamation."
February 26.—"Things We May Learn from the Indians."

Saturdays at 8 P. M. The continuation of a course on Evolution by Professor H. E. Crampton of Columbia University.

February 2.—"The Method of Evolution."
February 9.—"The Evolution of the Human Species."
February 16.—"The Evolution of Human Races."
February 23.—"Evolution of Mind, of Society and of Ethics."

These lectures are given in coöperation with the Department of Education of the City of New York. They are open free to the public and no tickets are required for admittance, except in the case of children, who, on account of the regulations of the Department of Education, will be admitted only on presentation of the ticket of a Member of the Museum.

The doors open at 7:30 o'clock and close when the lectures begin.

MEETINGS OF SOCIETIES.

Meetings of the New York Academy of Sciences and Affiliated Societies are held at the Museum according to the following schedule:

On Monday evenings, The New York Academy of Sciences:
First Mondays, Section of Geology and Mineralogy.
Second Mondays, Section of Biology.
Third Mondays, Section of Astronomy, Physics and Chemistry.
Fourth Mondays, Section of Anthropology and Psychology.

On Tuesday evenings, as announced:
The Linnæan Society, The New York Entomological Society and the Torrey Botanical Club.

On Wednesday evenings, as announced:
The New York Mineralogical Club.

The programme of meetings of the respective organizations is issued in the weekly "Bulletin" of the New York Academy of Sciences and sent to the members of the several societies. Members of the Museum on making request of the Director will be provided with these circulars as they are published.

Scientific Staff

DIRECTOR

HERMON C. BUMPUS, Ph.D., Sc. D.

DEPARTMENT OF PUBLIC INSTRUCTION

Prof. ALBERT S. BICKMORE, B. S., Ph.D., LL.D., Curator Emeritus
GEORGE H. SHERWOOD, A.B., A.M., Curator

DEPARTMENT OF GEOLOGY AND INVERTEBRATE PALÆONTOLOGY

Prof. R. P. WHITFIELD, A.M., Curator
EDMUND OTIS HOVEY, A.B., Ph.D., Associate Curator

DEPARTMENT OF MAMMALOGY AND ORNITHOLOGY

Prof. J. A. ALLEN, Ph.D., Curator
FRANK M. CHAPMAN, Associate Curator

DEPARTMENT OF VERTEBRATE PALÆONTOLOGY

Prof. HENRY FAIRFIELD OSBORN, A.B., Sc.D., LL.D., D.Sc., Curator
W. D. MATTHEW, Ph.B., A.B., A.M., Ph.D., Associate Curator
O. P. HAY, A.B., Ph.D., Associate Curator of Chelonia
Prof. BASHFORD DEAN, A.B., A.M., Ph.D., Honorary Curator of Fishes

JESUP NORTH PACIFIC EXPEDITION

Prof. FRANZ BOAS, Ph.D., in Charge

DEPARTMENT OF ETHNOLOGY

CLARK WISSLER, A.B., A.M., Ph.D., Acting Curator
HARLAN I. SMITH, Assistant Curator
GEORGE H. PEPPER, Assistant
CHARLES W. MEAD, Assistant

DEPARTMENT OF ARCHÆOLOGY

Prof. MARSHALL H. SAVILLE, Associate Curator

DEPARTMENT OF ENTOMOLOGY

WILLIAM BEUTENMÜLLER, Curator

DEPARTMENTS OF MINERALOGY AND CONCHOLOGY

L. P. GRATACAP, Ph.D., A.B., A.M., Curator
GEORGE F. KUNZ, A.M., Ph.D., Honorary Curator of Gems

DEPARTMENT OF BOOKS AND PUBLICATIONS

Prof. RALPH W. TOWER, A.B., A.M., Ph.D., Curator

DEPARTMENT OF INVERTEBRATE ZOÖLOGY

Prof. WILLIAM MORTON WHEELER, Ph.D. Curator
ROY W. MINER, A.B., Assistant Curator
B. E. DAHLGREN, D.M.D., Assistant Curator

DEPARTMENT OF PHYSIOLOGY

Prof. RALPH W. TOWER, A.B., A.M., Ph.D., Curator

DEPARTMENT OF MAPS AND CHARTS

A. WOODWARD, Ph.D., Curator

The American Museum Journal

EDMUND OTIS HOVEY, *Editor*

FRANK M. CHAPMAN,
LOUIS P. GRATACAP,
WILLIAM K. GREGORY, } *Advisory Board*

Subscription, One Dollar per year. Fifteen Cents per copy.

A subscription to the JOURNAL is included in the membership fees of all classes of Members of the Museum.

Subscriptions should be addressed to The American Museum Journal, 30 Boylston St., Cambridge, Mass., or 77th St., and Central Park West, New York City.

Entry as second-class matter applied for in the Post-office at Boston, Mass.
Act of Congress, July 16, 1894.

CONTENTS, VOL. VII, NO. 2

	PAGE
MEMORIALS OF MEN OF SCIENCE. (*Illustrated*)	19
EXHIBITION OF PROGRESS OF SCIENCE	21
EXPEDITION TO THE DESERT OF FAYOUM, EGYPT	25
THE MUSEUM BULLETIN FOR 1906	26
MUSEUM NEWS NOTES	28
LECTURE ANNOUNCEMENTS	31
MEETINGS OF SOCIETIES	32

E. W. Wheeler, Printer, Cambridge, Mass.